A MULTI-FUNCTION TRANSACTION TERMINAL

BACKGROUND OF THE INVENTION

Claim of Priority

The present application is based on and a claim to priority is made under 35 U.S.C. Section 119(e) to provisional patent application currently pending in the U.S. Patent and Trademark Office having Serial No. 60/416,735 and a filing date of October 7, 2002.

Field of the Invention

The present invention relates to a multi-function transaction terminal whereby a variety of functions can be achieved at a single, interactive and automated location, those functions being achieved in a substantially secure fashion that provides a number of value added services.

DESCRIPTION OF THE RELATED ART

ATM machines and similar kiosk type computerized applications exist for a variety of different applications. Unfortunately, however, often such applications are very specific and dedicated to exacting tasks, and do not have multi-function flexibility and capability. Furthermore, such existing terminals often rely on traditional pin number type security systems which can prove to be insufficiently secure in a variety of circumstances. As a result, it would beneficial to provide a transaction terminal which not only provides secure access to a variety of monetary functions, but is also capable of dispensing products and can provide value added services to increase the overall security of transactions which are made at the terminal itself, as well as a variety of other locations where conventional transactions take place.

SUMMARY OF THE INVENTION

The present invention relates to a multi-function transaction terminal. In particular, the present transaction terminal preferably includes a display screen associated with an input device, such as a keyboard, voice control, or in the preferred embodiment, a touch screen, whereby a user is able to input a variety of information so as to interact with the transaction terminal. The transaction terminal itself includes a processor which receives the information and is capable of performing a variety of functions and generating and/or issuing a variety of articles. For example, the transaction terminal of the present invention preferably functions in a similar manner to a conventional ATM machine, providing cash to individuals either from their checking and/or savings account, and/or as advances from credit accounts. As a result, preferably through a secure and/or encrypted connection, the transaction terminal is preferably structured to communication with one or more remote servers whereby information can be verified, stored and/or otherwise accessed.

In addition to providing a convenient source for access to funds from an existing account, the present transaction terminal is also preferably associated with the initiation of new accounts, whether in conjunction with one or more associated banks and/or in conjunction with wire transfers and/or fund issuances. For example, the present transaction terminal is preferably structured to receive a variety of user information, and utilizing the interactive connection with one or more remote servers, to establish credit and/or other account approval for a particular user, thereby establishing a new account for that user. To this end, the present transaction terminal is preferably structured to issue a transaction card, such as an ATM card and/or credit card which is associated with that newly formed account and/or an existing account. This newly formed account can be associated with a bank and/or can be a completely remote account associated with a transaction agency that monitors funds and/or the issuance of services associated with the account. For example, the account may include a wire transfer account wherein a user is able to pay bills or advance funds, such as from one user to another and/or by other means including the internet and/or specified location into a user card. By way of example, a user may either utilize a cash input associated with the transaction terminal and/or a credit authorization input wherein a credit account may be introduced for verification, and as such, the user can identify a quantity of funds which will be transferred to another user or payee, either at a remote location and/or to a newly issued and/or previously issued rechargeable user account. As a result, in a circumstance wherein a user wants to give someone, such as a child, employee, etc. a limited amount of funds which they can utilize in a conventional manner, such as may be achieved using an ATM card, check or credit card, the user is able to load a predefined amount onto that newly dispensed or previously dispensed but refillable account card. The recipient of the account card may then provide that account card to any of a variety of locations for normal verification in the same manner as an ATM, check and/or credit card account may be provided, and appropriate accreditation of funds up to the predefined inputted amount can be achieved. Along these lines, it also understood that prepaid account cards having a predefined amount or monetary value may also be provided whereby a user is able to select a card of a select denomination for either issuance and/or recharging of a card. Also, in an alternative embodiment matching or associated account cards are provided to multiple users. The matching account cards being available so as to facilitate transfer between one card and another, such as a parent or student, at the same or remote locations, may also be provided.

In addition to the functionality of financial services that may be provided in association with the present transaction terminal, it is also understood that a variety of marketing and/or advertising purposes may also be achieved, such as requesting a price quote for a specific selected product, such as cars, appliances, etc. and/or for the dispensing of other immediately available products such as telephone cards, prepaid parking, etc. To this end, it is recognized that a transaction terminal of the present invention will in some applications be receiving funds and in some applications be distributing funds. As such, the present transaction terminal is preferably structured so as to segregate and organize funds that are received and dispose them in a dispensing orientation such that subsequent issuances of funds can be achieved utilizing the same money, thereby reducing the amount of times which the present transaction terminal of the present invention needs to be refilled.

In addition to the additional value added functions previously recited for the present transaction terminal, in a preferred embodiment of the present invention, the present transaction terminal will also include a video input and/or image captured device as well as a biometric input and/or capture device. Specifically, a video and/or photographic camera may be disposed so as to effectively take a photograph or video of the user to record transactions and/or specifically to take a photograph of that user, allowing the user to accept and/or approve the photo once taken, said photo being utilized for imprinting on an issued card which can either be mailed to them subsequently and/or issued directly on site by the transaction terminal.

To this end, it is recognized that increased security can be achieved by placing a photograph on a specific card. As such, the present transaction terminal may provide a facility wherein existing customers of existing banks and/or credit accounts, and all customers desiring new cards, can input their appropriate information and have their photograph taken for imprinting on a newly issued card, which as indicated, can be issued on site by the present transaction terminal and/or issued on site by the present transaction terminal and/or forwarded to the issuing bank or other financial facility for subsequent issuance of a new card. As a result, the user need not go to that specific financial institution and/or a dedicated location for adding a substantial degree of security to their account card by imprinting their photograph.

Also as mentioned, a biometric input and/or reader is also provided in association with the present transaction terminal. This biometric reader and/or input is preferably provided for the purpose of ensuring the user's identity when a biometric input has ben previously recorded, such as their fingerprint, as well as for accepting newly verified biometric information for future utilization and verification purposes. Along these lines, the biometric information in addition to or instead of the photographic information may be otherwise stored on a transaction card which is issued by the transaction terminal and/or subsequently issued by a financial institution. It is understood that this can be achieved utilizing a smart card and/or other chip embedded type card and/or utilizing the magnetic stripe, although it is understood that the smart card is preferred for a greater storage capacity. As a result, a user wishing to add substantial degree of security to their existing cards may provide account information for their existing card, have a photograph taken and provide biometric input which can subsequently be associated with their newly issued transact card and significantly increase the security associated with its future use. It is understood that these photographic and biometric facilities may be associated with any of the cards that are issued and/or read for verification in association with the present transaction terminal.

These and other objects, features and advantages of the present invention will become more clear when the drawings as well as the detailed description are taken into consideration.

Brief description of the Drawings

For a fuller understanding of the nature of the present invention, reference should be had to the following detailed description taken in connection with the accompanying drawings in which:

Figure 1 is a front view of a preferred embodiment of the present multi-function transaction terminal;

Figure 2 is a schematic representation of the multi-function transaction terminal of the present invention;

Figure 3 is a representation of a payment card; and Figure 4 is a representation of a transaction card.

Like reference numerals refer to like parts throughout the several views of the drawings.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

The present invention relates to a multi-function transaction terminal, generally indicated as 10. The transaction terminal 10 may be a stand alone or wall mounted unit located to be easily accessible by one or more users. As such, the transaction terminal 10 may be seen to include a housing, preferably formed of a sturdy material configured to prevent theft and minimize unauthorized access into an interior thereof. Moreover, if it is to be positioned in a public, exposed or unsupervised location, fixed positioning of the housing is also preferred, such as utilizing a very heavy base, fasteners and/or wall/floor mounting.

Preferably disposed in an accessible location, such as on a front of the housing is a display 30 and one or more user inputs 30/32. For example, in the illustrated embodiment, a keypad 32 may be provided as one for of user input, and in addition to or instead of the keypad 32, the display 30 may also comprise a user input in the form of a touch screen. As such, a user is able to very easily and conveniently view necessary information, make necessary choices, such as selecting a product to be purchased or transaction to be made, and provide appropriate inputs. Of course, it is recognized that other conventional facilities, such as a receipt printer, audio input/output, actuation buttons, etc. may also be provided to facilitate interaction with the transaction terminal 10.

Because the transaction terminal 10 may be used for the purchase of various products and/or services, one or more payment receivers 40/42 maybe provided. Specifically, the payment receivers may be in the form of a currency acceptor 42 that accepts coins and/or bills, and/or a card reader/acceptor 40 that accepts a payment card. Of course, it is understood that if desired, a user can input account information manually and achieve necessary verification such that the user input(s) may actually function as a payment receiver. Looking specifically to the payment card reader/acceptor, it may be configured to allow a user to swipe a payment card 80 or to insert a payment card 80 for internal processing and possible alteration as will be described subsequently. As such, the card reader/acceptor 42 may be configured to read a magnetic stripe 82, embedded micro chip 81 such as are used with smart cards, laser recognition, or any other means to read information from a payment card 80. Indeed, even though the payment card 80 preferably comprises a conventional credit card or debit card, it may take on any configuration capable of containing account and/or other information, such as a disc, chip, etc.

Contained, preferably at least partially within the housing 20 is a transaction processor 60. The transaction processor 60 may include one or more computer processors structured to facilitate, verify and validate the various transactions that may be achieved using the present transaction terminal 10. Moreover, the portion of the transaction processor 60 contained in the housing is preferably communicatively associated with one or more remote processors 65 which may comprise a portion of the transaction processor and or may merely be affiliated processors whereby communication of verification information, validation information and/or personal user information data may be achieved as needed.

Looking to one embodiment of the transaction terminal 10, it is structured to issue to a user a transaction card 85. The transaction card, may include a thermally printed card imprinted on special paper stock, a receipt type document or as may ultimately be preferred a stiff payment card type card. In any such instance the transaction card may include an account number and/or some form of identifier thereon, whether embossed, printed, or stored, such as on a magnetic stripe 82 or chip 81.

With the issuance of a transaction card 85, the present transaction terminal 10 may achieve a variety of services. For example, the transaction terminal 10 may be utilized so as to dispense pre-paid cards, such as gift cars and/or calling cards. Additionally, however, the transaction card 85 may have a specific defined value associated therewith, in accordance with a payment received using the payment receiver 40/42, that defined value being useable not only as a pre-paid calling card or gift card associated with a specific merchant or merchants, but will preferably function as a normal payment card that can be used at an affiliated or unaffiliated location that is normally equipped to process payments utilizing a payment card, such as a debit or credit card. Accordingly, the transaction card generated using the transaction terminal may be utilized as a money transfer vehicle and/or a controlled spending facilitator. For example, a user wishing to provide funds to another may place a certain value on the card and then issue that transaction card 85 to the other person. Subsequently that person can then use the transaction card 85 in a conventional fashion, a limit being defined by the value of the card. Moreover, a specific account is preferably associated with that transaction card 85 so as to permit validation, such as using a Visa or Mastercard affiliation, or to permit an account to be "re-filled" with additional funds.

In another embodiment of the present invention, the transaction to be achieve by the transaction terminal 10 may include wire transfers or remote bill payment. For example, a user may provide an appropriate payment and a corresponding amount is applied to a designated user account, such as to pay a phone bill or electric bill, or is transferred for issuance to another person at a remote location.

The transaction terminal 10 of the present invention may also include one or more personal identification input devices 30/32/70/74. The personal identification input device is structured to receive personal identification data from a user. I this regard, it may include a conventional input such as a keypad 32 or touch screen 30 for inputting a personal identification number, user account, password, etc. Preferably in the present invention, the personal identification input includes an image input device 70 and/or a biometric input device 74. Looking first to the image input device 70, it may include a photo or still camera that can capture an image of the user as the personal identification data. This image of the use can then be used for verification purposes, such as by comparing it to a file image, and/or preferably can be used to enhance the security of existing transaction accounts. For example, in a preferred embodiment of th present invention a printer assembly 52 is provided. The printer assembly 52 which may be used to print account or other information on the transaction card 85 is also preferably configured to print the image of the user 83 on the transaction card 85, thereby increasing the security of its subsequent use. Also, if desired, the printer assembly may be further configured to print the image of the user 83 on the previously issued payment card 80. For example a user wishing to enhance the security of an existing payment card may utilize the present transaction terminal 10 to print their photo an a previously issued card. Alternately, the transaction processor 60 may communicate the personal identification data to a remote processor 65 such that the issuing authority for the payment card 80 can subsequently issue a new card with the image thereon.

In addition to the use of an image as personal identification data, it is recognized that other types of personal identification data may also be used and stored on the transaction card 85 or the payment card 80 by the transaction terminal 10, or be communicated to a remote processor 65 for subsequent storage on a payment card 80. In the present invention, however, a biometric input device 74 may be provided. The biometric input device 74, which may be configured to capture a retinal scan, DNA sample or other biometric input is preferably configured to identify a fingerprint of the user as the biometric identification data. The transaction processor 60 can then direct the storage of this biometric identification date directly on the payment card 80 or transaction card 85, such as on the magnetic stripe 82 or chip 81, or can communicate this biometric identification data to a remote processor 65 for subsequent association with a designated user account.

With regard to the personal identification input devices associated with the present invention, it is understood that they may be used merely to obtain the personal identification data for association with a card or account, and/or they may be used to identify the personal identification data for validation purposes in connection with a desired transaction. For example, as mentioned, the present transaction terminal, either with or without the use of the additional personal identification data for added security, may be used so as to issue pre-paid products, make payments on accounts, or if desired to dispense cash in the form of an ATM machine.

As yet another feature of the present invention, since the present transaction terminal will be utilized both to receive funds and to dispense funds, the payment receiver 42 and cash dispenser 50 are preferably operatively associated with one another such that the money collected can be subsequently dispensed. This thereby reduces the frequency at which the transaction terminal 10 must be refilled with cash. In the preferred embodiment, money collected by the payment receiver 42 is sorted by monetary denomination and stored in a specified location. When currency must later be dispensed, the desired amount is pulled from the sorted and/or segregated storage locations for issuance. Of course, less than perfect bills may be allocated to a non-reuse storage location. As such the present transaction terminal 10 provides a full service, multi-function system that can be used to consummate a variety of transactions or can merely be used to enhance security on existing accounts by facilitating the capture of personal identification data, such as a photo or fingerprint, and association that data with a card and/or account.

Since many modifications, variations and changes in detail can be made to the described preferred embodiment of the invention, it is intended that all matters in the foregoing description and shown in the accompanying drawings be interpreted as illustrative and not in a limiting sense. Thus, the scope of the invention should be determined by the appended claims and their legal equivalents.

Now that the invention has been described,